IAF - Radioökologie GmbH

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Hauff-Technik GmbH & Co. KG
Robert-Bosch-Str. 9
89568 Hermaringen

Certificate

Determination of the Radon Diffusion Coefficient

The radon diffusion coefficient D of the material "ABS" as supplied by the client

Hauff-Technik GmbH & Co. KG
Robert-Bosch-Str. 9
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has been experimentally determined by IAF-Radioökologie GmbH using a double chamber system. The results of the "radon tightness" are summarized in the following table.

Description of variables	**Measured values**
Diffusion coefficient D	$1.98 \cdot 10^{-12}$ m²/s
Diffusion length L_D	0.97 mm
Material thickness d	3.0 mm
Area of the material F	196 cm²
Test parameter $R = d/L_D$	3.09
Result	**R > 3, i.e., radon tight**

A material is rated "radon tight" if its thickness exceeds the radon diffusion length of the material at least by a factor 3. Otherwise the material is rated “not radon tight”. A "radon tight" material is defined by a material which, when covering a radon-exhaling surface, reduces the exhalation rate by at least 95% compared to the bare surface.

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